

21. **Allowable Emissions:** The Permittee shall not allow emissions into the atmosphere in excess of any of the following:

	Daily Emission Limit	Twelve Month Rolling Average Emission Limit
Volatile Organic Compounds (VOCs)		

The Twelve month rolling average shall be calculated at the end of each calendar month by summing the emissions over the most recent twelve calendar months.

22. **Definitions:** For the purposes of these Permit Conditions, breakthrough shall be defined as less than a 90% VOC removal efficiency.
23. **Operating Parameters:** The testing results required below together with the other relevant factors such as temperature, humidity and working capacity of the particular carbon shall be used to estimate the time the system can operate before breakthrough occurs. The Permittee shall replace the carbon canisters before the calculated breakthrough time is reached as well as anytime breakthrough is discovered. Before the carbon canister replacement schedule can be extended, a new breakthrough time period must be established through testing. This replacement schedule does not relieve the Permittee from the requirement of assuring a VOC removal efficiency of at least 90%.

If the Permittee wishes to replace only the first of two canisters operating in series, it must be demonstrated through testing that breakthrough has not occurred on the first canister. When only the first canister is replaced, the remaining canister will be moved to the front position before operation is resumed.

24. **Testing:** Within four (4) hours of starting up the soil vapor extraction (SVE) system, the Permittee shall measure the VOC mass flow rate, VOC concentration entering the first carbon bed, and the VOC concentration in the carbon adsorption system exhaust.

If the SVE system contains a valve or any other device which could cause either the dilution or restriction of the soil gases entering the carbon canisters, its position must be measured and recorded any time a test sample is taken which is used to calculate the expected time until breakthrough.

Within thirty (30) days after the completion of any required testing, the Permittee shall notify the Department in writing of the test results including the VOC removal efficiency and the expected operating time until breakthrough.

25. **Record Keeping:** The Permittee shall maintain accurate records on site of the position of any flow dilution or restriction devices, the cumulative hours of operation of the SVE system, the required replacement interval for the carbon canisters and the date and cumulative operating time when the last canister replacement was made. These records shall be made available for immediate inspection by Department personnel upon request.
26. **Other:**
- a. The SVE system shall not contain a valve or any other device which could cause either the dilution or restriction of the soil gases entering the carbon canisters unless the position of the device can be measured and controlled.
 - b. The Permittee shall notify the Department in writing within seven (7) days after termination of soil remediation activities at the site.
27. **Operations and Maintenance (O&M) Plan:** The Permittee shall submit an O&M Plan to the Department for the carbon adsorption system. This O&M Plan shall be prepared in accordance with Department guidelines, and shall be submitted to the Department's Air Quality Compliance Manager within 45 days of the issuance of this permit.
28. **Reporting:** The Permittee shall submit air monitoring quarterly reports on the carbon adsorption system performance. The reports shall present operational data, analytical laboratory results, equipment malfunctions, maintenance activities, and an analysis of the data presented.